

REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1-5, 8, 12-16, 19, and 32-37 are currently pending in this application. Claims 6-7, 9-11, 17-18, and 20-31 have been canceled. Claims 1-5, 8, 12-16, and 19 have been amended to more clearly distinguish subject matter which the Applicant regards as the invention. New claims 32-37 have been added to capture subject matter which Applicant regards as the invention. Applicant submits that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 U.S.C. §103

Claims 1-3, 6-14, 17-25, and 28-31 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over admitted prior art of Applicant in view of U.S. Patent Publication No. 2003/0017835, to Bergel (hereafter Bergel). The Applicant respectfully disagrees.

The present invention is a method for improved channel quality indication in a dynamic link adapted wireless communication system. As claimed in claim 1, a receiver receives a downlink data communication on a downlink data channel, performs at least one current quality measurement, and based upon the at least one current quality measurement a predictive CQI is derived that estimates the future quality of the downlink data channel. The quality measurement may be signal to

interference ration (SIR), for example. The predictive CQI is then used in determining appropriate future signal characteristics. In this manner, the claimed invention provides a method for improving future transmission quality.

In contrast, Bergel teaches predicting the power of a pilot channel in a communication system employing a diverse antenna base station (see flow diagram Figures 4A, 4B, and 5). Based on the power measurements, Bergel teaches predicting the future transmission power of a received signal. In this manner, a slowly moving mobile station can reduce multipath fading by providing an indication of the predicted power of the received signal. Bergel only teaches the use of pilot channels and pilot channel beacons to measure signal transmission power; Bergel does not teach or remotely suggest using quality measurements of a data channel to derive a predictive CQI, as claimed in independent claims 1 and 12.

The admitted prior art in the present application points out that prior art techniques are inadequate because they fail to provide current or future channel quality indications, and are limited to providing old, or stale, channel quality indications. This is disadvantageous because non-current determinations of the channel conditions generally do not accurately reflect the current channel conditions. This inaccuracy in estimated channel conditions leads to reduced throughput, wastes transmit power and increases interference with other cells. Obtaining a current, accurate, assessment of the channel conditions by utilizing the

Applicant: Philip Pietraski
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method claimed in independent claims 1 and 12 for predicting future channel conditions is therefore advantageous.

The Applicant submits that the amended claims are not obvious over the admitted prior art in view of Bergel, and respectfully requests withdrawal of this §103(a) rejection of the pending claims.

The Examiner rejected claims 4, 15, and 26 under 35 U.S.C. § 103(a) as being unpatentable over admitted prior art of applicant and Bergel and further in view of U.S. Patent Publication No. 2003/0129992 to Koorapaty et al. (hereafter Koorapaty). Claim 26 is canceled by way of the foregoing amendment. Claims 4 and 15 depend from claims 1 and 12, respectively, which for the reasons presented above are not obvious over the admitted prior art in view of Bergel. Applicant respectfully requests reconsideration of these claims and withdrawal of the rejection under § 103(a).

The Examiner rejected claims 5, 16, and 27 under 35 U.S.C. § 103(a) as being unpatentable over admitted prior art of applicant and Bergel and further in view of U.S. Patent No. 5,305,468 to Bruckert et al. (hereafter Bruckert). Claim 27 is canceled by way of the foregoing amendment. Claims 5 and 16 depend from claims 1 and 12, respectively, which for the reasons presented above are not obvious over the admitted prior art in view of Bergel. Applicant respectfully requests reconsideration of these claims and withdrawal of the rejection under § 103(a).

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-5, 8, 12-16, 19, and 32-37, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Philip J. Pietraski

By 
Robert D. Leonard
Registration No. 57,204

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
Telephone: (215) 568-6400
Facsimile: (215) 568-6499

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